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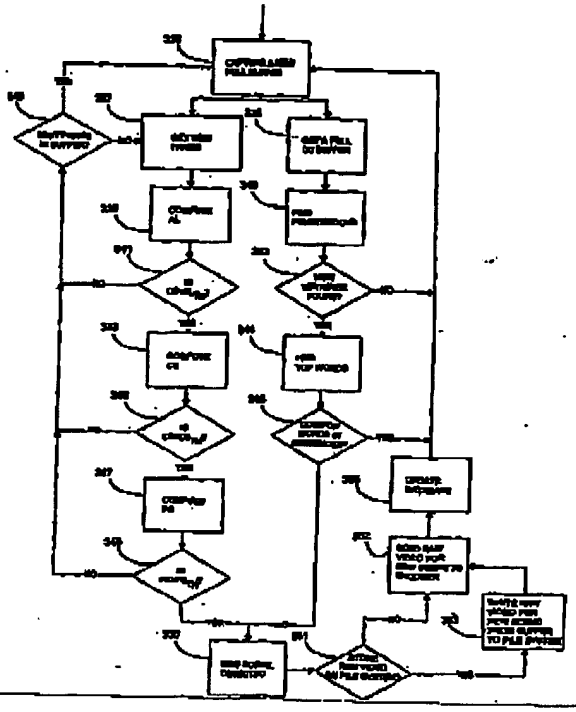
(54) Title: PROCESSING AND DELIVERY OF AUDIO-VIDEO INFORMATION

(57) Abstract

An automated real-time system for processing and distribution of audio-video data. The system performs automated, real-time analysis and scene detection, segmentation, indexing, and encoding of video for real-time presentation, browsing, or searching. By using automated real-time processing of audio-video data sources, the data is available to a user (a viewer) without a substantial delay that would be introduced by manual or off-line (batch oriented) automatic processing of the data. The processing is arranged in a pipelined process, reducing processing delays and requiring less intermediate storage than a batch-oriented processing approach. The audio-video sources are segmented into individual scenes, such as one story in a news broadcast, thereby allowing a user to access portions of source programming without having to view or scan through the entire programs or to specify a particular time interval. The system also makes combined use of video, audio, and closed-caption information in an audio-video signal to identify individual scenes. This combined use of multiple sources of information provides an improved scene detection capability. Characterization of individual scenes is based on a variety of sources of information including, for example, the closed-caption text and the output of a speech recognizer analyzing the audio information in the signal.



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